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EXAMINER

NINO, ADOLFO

ART UNIT

PAPER NUMBER

2831

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/056,943

Applicant(s)

HIGGS, THOMAS W.

Examiner

Adolfo Nino

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 and 59-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 116, 18-46 and 59-63 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the rocket motor comprising a rocket casing and the at least one body attached to a surface of the rocket casing must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The use of the trademark "Microballoon" has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 contains the trademark/trade name "Microballoon". Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe (see generic term) and, accordingly, the identification/description is indefinite.

Allowable Subject Matter

The indicated allowability of claims 1-32, 41-44 and 59-63 is withdrawn in view of the newly discovered reference(s) to Jenkins (US 4,911,510). Rejections based on the cited reference(s) follow. Moreover, the finality of the rejection of the last Office action is withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 15, 16, 18-21, 33-40, 45, 46, 62 and 63 are rejected under 35 U.S.C. 102(b) as being anticipated by Jenkins (US 4,911,510).

Regarding claim 1 (Previously Amended), Jenkins discloses a strain control device (fig. 7) comprising: a body (1, 2) having a first end and a second end (as marked by the Examiner in fig. 7); a first opening (as marked by the Examiner in fig. 7) defined in the first end; a second opening (as marked by the Examiner in fig. 7) defined in the second end; and at least one cavity (8 in figs. 2, 7) formed in a surface of the body extending between the first and second openings (fig. 7), a periphery (fig. 7) of the at least one cavity (8) being at least partially defined by a first wall (as marked by the Examiner in fig. 7) and a second opposing wall (as marked by the Examiner in fig. 7) which laterally deviates from the first wall (fig. 7).

Regarding claim 2, Jenkins discloses the strain control device (fig. 7) of claim 1, wherein the first wall (fig. 7) is configured as a substantially linear wall.

Regarding claim 3 (Previously Amended), Jenkins discloses the strain control device (fig. 7) of claim 1, wherein the at least one cavity (8) includes multiple cavities (each cavity of panels 1, 2 in fig. 7) arranged in a longitudinally extending end-to-end pattern including at least a first cavity and a second cavity, wherein the second cavity is configured as a reverse image of the first cavity with respect to a longitudinal centerline

passing through the first and second openings and wherein at least another opening is positioned between the first and second cavities (fig. 7).

Regarding claim 4 (Previously Amended), Jenkins discloses the strain control device (fig. 7) of claim 3, wherein the first, second and at least another openings are configured as substantially C-shaped openings in transverse cross section (fig. 2).

Regarding claims 15 and 16, the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

Regarding claim 18, Jenkins discloses the strain control device (fig. 7) of claim 1, wherein the second wall includes at least a portion which exhibits a substantially constant radius (fig. 2).

Regarding claim 19, Jenkins discloses the strain control device (fig. 7) of claim 1, further including a curved surface transition from the first and second walls to a base of the at least one cavity (fig. 2).

Regarding claim 20, Jenkins discloses the strain control device (fig. 7) of claim 1, wherein the first and second openings are sized and configured to receive and frictionally grasp a transmission line to be disposed therethrough (col. 4, lines 29-32).

Regarding claim 21, Jenkins discloses the strain control device (fig. 7) of claim 1, wherein the body is configured to elongate and contract, at least in a direction taken between the first and second openings (col. 4, lines 18-21).

Regarding claim 33 (Twice Amended), Jenkins discloses a strain control device (fig. 7) comprising: a body (1, 2) having a first end and a second end (as marked by the

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Examiner in fig. 7); and at least one cavity (8 in fig. 2) formed within a surface of the body between the first end and the second end, the at least one cavity (8) configured to receive at least a portion of a transmission line (6, 7 in fig. 1) therein and wherein the at least one cavity defines a deviation path for the at least a portion of the transmission line such that the at least a portion of the transmission line is enabled to be displaced between the first boundary of the cavity and the second opposing boundary of the cavity upon the elongation and contraction of the body (fig. 7).

Regarding claim 34 (Previously Amended), Jenkins discloses the strain control device of claim 33, wherein the at least one cavity is at least partially defined by a first substantially linear boundary and a second opposing boundary which deviates from the first substantially linear boundary (fig. 7).

Regarding claim 35, Jenkins discloses the strain control device of claim 34, wherein the second opposing boundary includes at least a portion which exhibits a substantially constant radius (fig. 7).

Regarding claim 36 (Previously Amended), Jenkins discloses the strain control device of claim 35, further comprising a first opening formed in the body at a first end of the at least one cavity and a second opening formed in the body at a second end of the at least one cavity (fig. 7).

Regarding claim 37, Jenkins discloses the strain control device of claim 36, wherein the first and second openings are configured to frictionally grasp the transmission line (col. 4, lines 29-32).

Regarding claim 38, Jenkins discloses the strain control device of claim 37, wherein the body is configured to elongate and contract at least in a direction taken substantially linearly between the first and second openings (col. 3, lines 48-49; and col. 4, lines 29-32).

Regarding claim 39 (Previously Amended), Jenkins discloses the strain control device of claim 38, wherein the deviation path is defined to allow displacement of the at least a portion of the transmission line towards the first substantially linear boundary upon the elongation of the body (fig. 7).

Regarding claim 40, Jenkins discloses the strain control device of claim 38, wherein the deviation path is defined to allow displacement of the at least a portion of the transmission line towards the second opposing boundary upon the contraction of the body (fig. 7).

Regarding claim 45 (Twice Amended), Jenkins discloses a strain control device (fig. 7) comprising: a body (1, 2) having a first grasping member configured to frictionally engage a first portion of a transmission line and a second grasping member configured to frictionally engage a second portion of the transmission line (not marked, but it would be the first and second openings as marked by the Examiner in fig. 7; col. 4, lines 29-32); and at least one cavity (8 in fig. 2) defined in the body between the first grasping member and the second grasping member (figs. 2, 7), the at least one cavity (8) being configured to accommodate a third portion of the transmission line therein and defining a deviation path for the third portion of the transmission line such that third portion of the transmission line may be displaced between a first boundary of the deviation path and a

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second opposing boundary of the deviation path upon elongation and contraction of the body (fig. 7).

Regarding claim 46 (Previously Amended), Jenkins discloses the strain control device of claim 45, wherein the at least one cavity is at least partially defined by a first substantially linear wall and a second opposing wall which deviates from the first substantially linear wall (figs. 2, 7).

Regarding claim 62. (Previously added), Jenkins discloses a strain control device (fig. 7) comprising: a body (1, 2) having a first end and a second end (as marked by the Examiner in fig. 7); and at least one cavity (8 in figs. 2, 7) formed within a surface of the body between the first end and the second end, the at least one cavity (8) configured to receive at least a portion of a transmission line therein and wherein the at least one cavity defines a deviation path for the at least a portion of the transmission line wherein the at least one cavity is at least partially defined by a first substantially linear boundary and a second opposing boundary which deviates from the first substantially linear boundary (fig. 7).

Regarding claim 63 (Previously added), Jenkins discloses a strain control device (fig. 7) comprising: a body (1, 2) having a first grasping member configured to frictionally engage a first portion of a transmission line (7) and a second grasping member configured to frictionally engage a second portion of the transmission line (col. 4, lines 29-32); and at least one cavity (8 in figs. 2, 7) defined in the body between the first grasping member and the second grasping member (fig. 7), the at least one cavity (8) being configured to accommodate a third portion of the transmission line therein and

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defining a deviation path for the third portion of the transmission line wherein the at least one cavity is at least partially defined by a first substantially linear wall and a second opposing wall which deviates from the first substantially linear wall (fig. 7).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 6 and 25 are rejected under 35 U.S.C. 103(a) as being obvious over Jenkins (US 4,911,510) in view of Hayward et al. (US 5,115,260).

Regarding claims 5 and 25, Jenkins discloses the strain control device of claims 4 and 22, respectively, **except for** further comprising a cover sized and configured to cooperatively mate with the body such that the multiple cavities are substantially concealed. Hayward et al. teach that it is known to have a cover sized and configured to cooperatively mate with the body of a strain control device such that the multiple cavities are substantially concealed as set forth at column 2, lines 23-24. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a cover sized and configured to cooperatively mate with the body of the strain control device such that the multiple cavities are substantially concealed, as taught by Hayward et al. in order to protect the body from the environment.

Regarding claim 6, the modified Jenkins discloses the strain control device of claim 5, wherein the cover is configured to thermally insulate the multiple cavities (col. 2, lines 24-30 of Hayward et al.).

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins in view of Hayward et al. as applied to claim 25 above, and further in view of Shu (US 4,567,318). The modified Jenkins discloses the strain control device of claim 25, **except for** the cover being formed of a first material and the body being formed of a second different material. Shu teaches that it is known to have a cover being formed of a first material and the body being formed of a second different material as set forth at column 3, lines 36-39; column 4, lines 14-21 and 48-55. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a cover being formed of a first material and the body being formed of a second different material, as taught by Shu in order to provide one of these two elements more deformable or malleable.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins in view of Hayward et al. as applied to claims 6 and 7 above, and further in view of Hawley's Condensed Chemical Dictionary.

Regarding claim 7, the modified Jenkins discloses the strain control device of claim 6, **except for** the cover being formed from a material including an aramid fiber. Hawley's Condensed Chemical Dictionary teaches that aramid fiber is a well known and

readably available step in rubber for the purpose of imparting impact strength and tear resistance. Hence, aramid fiber is a suitable addition that would have been obvious to add to the material of the strain control device disclosed in Jenkins. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have had modified the body of the strain control device of Jenkins to add aramid fiber as taught by Hawley's because Hawley's teaches that aramid fiber is a well known and readably available addition to a material for the purpose of imparting impact strength and tear resistance; moreover, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 8, the modified Jenkins discloses the strain control device (fig. 7) of claim 7, **except for** the body being formed of a material including nitrile rubber. Hawley's Condensed Chemical Dictionary teaches that nitrile rubber is a well known and readably available material for usage as a gasket/grommet that are flexible at a very low temperature. Hence, nitrile rubber is a suitable material that would have been obvious to use as the material of the strain control device disclosed in Jenkins. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have had modified the body of the strain control device of Jenkins to be formed of nitrile rubber as taught by Hawley's because Hawley's teaches that nitrile rubber is a well known and readably available material for usage as a gasket/grommet; moreover, since it has been held to be within the general skill of a

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worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claims 9-14, 22-24, 27-32 and 59-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins (US 4,911,510).

Regarding claims 9 and 28, Jenkins discloses the strain control device (fig. 7) of claims 1 and 22, respectively, **except for** the body being formed of a material including nitrile rubber. Hawley's Condensed Chemical Dictionary teaches that nitrile rubber is a well known and readily available material for usage as a gasket/grommet that are flexible at a very low temperature. Hence, nitrile rubber is a suitable material that would have been obvious to use as the material of the strain control device disclosed in Jenkins. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have had modified the body of the strain control device of Jenkins to be formed of nitrile rubber as taught by Hawley's because Hawley's teaches that nitrile rubber is a well known and readily available material for usage as a gasket/grommet; moreover, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claims 10 and 29, Jenkins discloses the strain control device (fig. 7) of claims 1 and 22, respectively, **except for** the body being formed of a material including neoprene. Hawley's Condensed Chemical Dictionary teaches that neoprene is a well known and readily available material for usage as a gasket/seal. Hence, neoprene is

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a suitable material that would have been obvious to use as the material of the strain control device disclosed in Jenkins. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have had modified the body of the strain control device of Jenkins to be formed of neoprene as taught by Hawley's because Hawley's teaches that neoprene is a well known and readably available material for usage as a gasket/seal; moreover, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 11, Jenkins discloses the strain control device (fig. 7) of claim 1, **except for** the body is formed of a material which includes silica. Hawley's Condensed Chemical Dictionary teaches that silica is a well known and readably available material with high heat resistance as one of its properties. Hence, silica is a suitable additional material that would have been obvious to incorporate in the material of the strain control device disclosed in Jenkins. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have had modified the body of the strain control device of Jenkins to be formed of a material that includes silica as taught by Hawley's because Hawley's teaches that silica is a well known and readably available material with a high heat resistance as one of its properties; moreover, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 12, Jenkins discloses the strain control device of claim 1, **except for** the body being formed of a material which includes a plurality of reinforcing fibers. Hawley's Condensed Chemical Dictionary teaches that reinforcing fibers is a well known and readably available step in rubber for the purpose of imparting impact strength and tear resistance. Hence, reinforcing fibers is a suitable addition to a material that would have been obvious to add to the material of the strain control device disclosed in Jenkins. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have had modified the body of the strain control device of Jenkins to add reinforcing fibers as taught by Hawley's because Hawley's teaches that reinforcing fibers is a well known and readably available addition to a material for the purpose of imparting impact strength and tear resistance; moreover, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 13, as best understood by the Examiner, Jenkins discloses the strain control device of claim 1, **except for** the body being formed of a material which includes "Microballoon". Hawley's Condensed Chemical Dictionary teaches that "Microballoon" is a well known and readably available material for usage as an extender in plastics to achieve low density. Hence, "Microballoon" is a suitable material that would have been obvious to add to the material of the strain control device disclosed in Jenkins. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have had modified the material of the control device

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body of Jenkins to include "Microballoon" as taught by Hawley's because Hawley's teaches that "Microballoon" is a well known and readably available material for usage as an extender in plastics to achieve low density; moreover, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 14, Jenkins discloses the strain control device of claim 1, **except for** the body being formed of a material which varies in density between a first portion of the body and a second portion of the body. Hawley's Condensed Chemical Dictionary teaches that "Microballoon" is a well known and readably available material for usage as an extender in plastics to achieve a different density between a first portion of a body where the "Microballoon" was used and a second portion of the body where the "Microballoon" was not used. Hence, the usage of "Microballoon" at certain portion(s) in the material of the strain control device disclosed in Jenkins would have been obvious in order to vary the density between a first and a second portion of the body of the strain control device. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have had modified the material of the control device body of Jenkins to include "Microballoon" as taught by Hawley's because Hawley's teaches that "Microballoon" is a well known and readably available material for usage as an extender in plastics to achieve low density; moreover, since it has been held to be within the general skill of a worker in the art to select a

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known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 22 (Previously Amended), Jenkins discloses a strain control device (fig. 7) comprising: a body (1, 2) having a first end and a second end (as marked by the Examiner in fig. 7); a first opening defined in the first end; a second opening defined in the second end (as marked by the Examiner in fig. 7); and at least a first cavity (8 in figs. 2, 7) formed in a surface of the body, the cavity (8) of the at least a first cavity extending between an opening of the first opening and an opening of the second opening (figs. 2, 7), the at least a first cavity (8) having a periphery which is at least partially defined by a first wall and a second opposing wall which deviates from the first wall (fig. 7), **but Jenkins does not disclose** a plurality of openings defined in the first end; a second plurality of openings defined in the second end; and at least a first plurality of cavities formed in a surface of the body. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a plurality of openings defined in the first end; a second plurality of openings defined in the second end; and at least a first plurality of cavities formed in a surface of the body, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

Regarding claim 23, the modified Jenkins discloses the strain control device (fig. 7) of claim 22, wherein the first wall comprises a substantially linear wall (figs. 2, 7).

Regarding claim 24 (Previously Amended), the modified Jenkins discloses the strain control device of claim 22, **except for** further comprising a second plurality of

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cavities and a third plurality of openings, wherein each cavity of the second plurality of cavities includes a periphery having a third wall and a fourth opposing wall which deviates from the third wall, each cavity of the second plurality of cavities being adjacent to a cavity of the at least a first plurality of cavities arranged in a longitudinally extending end-to-end pattern, and wherein each of the third plurality of openings is disposed between a one of the at least a first plurality of cavities and an adjacent one of the second plurality of cavities. It would have been obvious to one having ordinary skill in the art at the time the invention was made to a second plurality of cavities and a third plurality of openings, wherein each cavity of the second plurality of cavities includes a periphery having a third wall and a fourth opposing wall which deviates from the third wall, each cavity of the second plurality of cavities being adjacent to a cavity of the at least a first plurality of cavities arranged in a longitudinally extending end-to-end pattern, and wherein each of the third plurality of openings is disposed between a one of the at least a first plurality of cavities and an adjacent one of the second plurality of cavities, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Regarding claim 27 (Previously Amended), the modified Jenkins discloses the strain control device of claim 22, wherein each of the first and second pluralities of openings is configured as a substantially C-shaped opening (fig. 2).

Regarding claim 30 (Previously Amended), the modified Jenkins discloses the strain control device of claim 22, wherein the second opposing wall of each of the at

least a first plurality of cavities includes at least a portion which exhibits a substantially constant radius (fig. 2).

Regarding claim 31 (Previously Amended), the modified Jenkins discloses the strain control device of claim 22, wherein each of the first and second pluralities of openings is sized and configured to receive and frictionally grasp a transmission line passing therethrough (col. 4, lines 29-32).

Regarding claim 32, the modified Jenkins discloses the strain control device of claim 22, wherein the body is configured to elongate and contract at least in a direction taken between the first and second openings (col. 4, lines 18-21).

Regarding claim 59 (Previously Amended), Jenkins discloses a strain control device comprising: a body (1, 2), each body section (1, 2) including: at least one cavity formed therein (8 in fig. 2), the at least one cavity (8) having a periphery defined at least partially by a first wall and a second opposing wall which deviates laterally from the first wall (figs. 2, 7); and at least one grasping member (col. 4, lines 29-32) configured to receive and frictionally grasp a transmission line to be installed therein, **but Jenkins does not disclose** the body (1, 2) having a plurality of body sections arranged in a longitudinally extending pattern. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the body having a plurality of body sections arranged in a longitudinally extending pattern, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Regarding claim 60 (Twice Amended), Jenkins discloses a strain control device (fig. 7) comprising: a body (1, 2) having a cavity (8) arranged in a longitudinally extending pattern (fig. 7), the cavity (8) being at least partially defined by a first wall and a second wall (as marked by the Examiner in fig. 7) which laterally deviates from the first wall (figs. 2, 7); and a first plurality of grasping members (col. 4, lines 29-32), **but Jenkins does not disclose** a first plurality of said cavities (8), nor wherein at least one grasping member of the first plurality is disposed between each of two adjacent cavities of the first plurality of cavities. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a first plurality of cavities arranged in a longitudinally extending pattern, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Moreover, with said first plurality of said cavities (8) arranged in a longitudinally extending pattern, at least one grasping member of the first plurality is disposed between each of two adjacent cavities of the first plurality of cavities (col. 4, lines 29-32).

Regarding claim 61 (Previously Amended), the modified Jenkins discloses the strain control device of claim 60, further comprising at least a second plurality of cavities arranged in a longitudinally extending pattern and a second plurality of grasping members, wherein at least one grasping member of the second plurality of grasping members is disposed between each of two adjacent cavities of the second plurality of cavities (col. 4, lines 29-32).

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Claims 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Jenkins (US 4,911,510).

Regarding claim 41 (Previously Amended), AAPA discloses a rocket motor (102 in fig. 1 of AAPA) comprising: a rocket casing (110 in fig. 1 of AAPA); at least one body (100 in fig. 1 of AAPA) attached to a surface of the rocket casing (fig. 1 of AAPA), the at least one body (100) having a first end and a second end; **but AAPA does not disclose** a first opening defined in the first end of the at least one body; a second opening defined in the second end of the at least one body; and at least one cavity formed in a surface of the at least one body, the at least one cavity extending between the first and second openings, a periphery of the at least one cavity being at least partially defined by a first substantially linear wall and a second opposing wall which deviates from the first substantially linear wall. Jenkins teaches that it is known to have a body attached to a surface in order to provide some type of constraint in a wire as set forth at column 1, lines 4-8. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the body having a first opening defined in the first end of the at least one body; a second opening defined in the second end of the at least one body; and at least one cavity formed in a surface of the at least one body, the at least one cavity extending between the first and second openings, a periphery of the at least one cavity being at least partially defined by a first substantially linear wall and a second opposing wall which deviates from the first substantially linear wall (fig. 7 of Jenkins), as taught by Jenkins in order to control the contour of the wire going around the rocket motor.

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Regarding claim 42, the modified AAPA discloses the rocket motor of claim 41, further comprising a transmission line (6 in fig. 1 of Jenkins) disposed within the at least one cavity and extending through the first and second openings (fig. 1 of Jenkins).

Regarding claim 43 (Previously Amended), the modified AAPA discloses the rocket motor of claim 42, wherein the transmission line (6 in fig. 1 of Jenkins) is arranged within the at least one cavity (8 in figs. 2, 7 of Jenkins) such that it is displaced from both the first and second walls while the at least one body is in a state exhibiting substantially no strain (figs. 1, 7 of Jenkins).

Regarding claim 44, the modified AAPA discloses the rocket motor of claim 43, wherein the first and second openings are sized and configured to frictionally grasp the transmission line (col. 4, lines 29-32 of Jenkins).

Allowable Subject Matter

Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: With respect to claim 17, the prior art of record does not disclosed nor teach, alone or in combination, the limitation therein of "further comprising an adapter including an annular body having a first inner radius and second larger outer radius, wherein the second larger outer radius is sized and configured to cooperatively contact an inner wall

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of at least one of the first and second openings" in combination with the other claim limitations.

Response to Arguments


Applicant's arguments with respect to claims 33 and 45 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adolfo Nino whose telephone number is (703) 305-1071. The examiner can normally be reached on M-F (7:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A Reichard can be reached on (703) 308-3682. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

AN
May 21, 2003

 5/22/03
DEAN A. REICHARD
SUPERVISORY PATENT EXAMINER
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